

### ABSTRACT OF THE DISCLOSURE

5 A technique for reducing noise in pixel images includes shrinking initial image data, and processing the shrunken image with known segmentation-based filtering techniques which identify and differentially process structures within the image. After processing, the shrunken image is enlarged to the dimensions of the initial data, subsequently processed if necessary and the final image is displayed or analyzed. The resulting technique is versatile and provides greatly improved computational efficiency while maintaining image quality and robustness.